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TABLE OF CONTENTS

SUMSTINE— <i>Polyporus Pennsylvanicus</i> Sp. Nov	137
SHELDON—A Study of the Leaf-Tip Blight of <i>Dracena Fragrans</i>	138
DURAND—The Mycological Writings of Theodor Holmskjold, Etc...	141
MORGAN—North American Species of Agaricaceae	143
RICKER—Third Supplement to New Genera of Fungi.....	154
KELLERMAN—Index to North American Mycology.....	158
KELLERMAN—Notes from Mycological Literature XXIV.....	169
EDITOR'S NOTES.....	184

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TABLE OF CONTENTS

SUMSTINE— <i>Polyporus Pennsylvanicus</i> Sp. Nov.....	137
SHELDON—A Study of the Leaf-Tip Blight of <i>Dracæna Fragrans</i>	138
DURAND—The Mycological Writings of Theodor Holmskjold, Etc....	141
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EDITOR'S NOTES.....	184

POLYPORUS PENNSYLVANICUS SP. NOV.

DAVID R. SUMSTINE.

Pileus orbicular, entire, convex to depressed, subumbilicate, 2-6 cm. broad, even, glabrous or with few scattered innate fibrils, pale ochraceous, tan-colored to isabelline, margin thin, acute, inflexed, with few fugacious cilia; context white, 1-10 mm. thick; tubes white, unequally hexagonal, irregular, angular, 0.5-1 mm. long, about 2 to a mm., varying in shape and size, dissepiments thin, edges becoming serrulate or fimbriate, decurrent; spores large, elliptic-fusoid, nucleate, hyaline; stipe central or sometimes somewhat eccentric, 2-4 cm. long, 2-10 mm. thick, concolorous with the pileus or a little lighter, yellow tomentose, especially so at the base, solid, white within, increasing above and expanding into the pileus, sometimes the tubes are decurrent to the base of the stipe giving the stipe a lacerated or reticulated appearance.

The fresh plants emit a very perceptible nitrous odor.

Growing on fallen sticks, Fern Hollow, Allegheny County, Pennsylvania.

June 12, 1906. (Type.) Also collected at Sandy Creek, Allegheny County.

Type specimens are in the Herbarium of the Carnegie Museum, Pittsburgh, Pennsylvania.

This plant is related to *P. polyporus*, *P. arcularius*, *P. elegans*, *P. latus*. It is most closely related to *P. latus* if published descriptions of this species are reliable. It seems, however, that *P. latus* has not yet been found in America. *P.*

lentus is said to have a squamulose pileus and a thin and short stipe. This description is not applicable to my specimens. Twelve sporophores in different stages of development were collected and none of them appear squamulose. The pileus of an old weathered specimen of *P. latus* may become smooth just as we find it to be the case in old specimens of *P. polyporus* and *P. arcularius*. All my specimens both old and young have a smooth pileus.

The following table may aid in distinguishing these related species:

Tubes regular or nearly so,	1.
Tubes irregular or hexagonal,	2.
1. Pileus villose, usually dark colored,	<i>P. polyporus</i> .
1. Pileus glabrous, ochraceous, stipe black at base,	<i>P. elegans</i> .
2. Pileus squamulose, grayish fuscous, pores large,	<i>P. arcularius</i> .
2. Pileus squamulose, ochraceous-pallid, pores large,	<i>P. latus</i> .
2. Pileus glabrous or nearly so, tan-colored or isabelline, pores smaller,	<i>P. pennsylvanicus</i> .

Dr. W. A. Murrill kindly compared some of my specimens with material in the Herbarium of the New York Botanical Garden.

Wilkinsburg, Pa.

A STUDY OF THE LEAF-TIP BLIGHT OF DRACÆNA FRAGRANS.

JOHN L. SHELDON.

Last winter, several diseased plants of *Dracaena fragrans* were noticed in the greenhouses of the West Virginia Experiment Station. Most of the lower leaves were dead and the middle ones were dead at the tips. There were small black specks scattered through the dead portions of the leaves, for the most part on the upper side. A microscopical examination showed that the leaves had probably been killed by a species of *Gloeosporium*.

After consulting the pathological literature in the station library, I decided that Dr. Halsted¹ had found the same disease some years before and had called it a "leaf-tip blight." He says in his description of it, "The fungus which was destroying the

¹ Halsted, B. D. Leaf-tip blight of *Dracaena fragrans*. Rept. N. J. Agr. Exp. Sta. 14:413. 1893.

leaf inch by inch is a species of anthracnose of the genus *Gloeosporium*."

Several anthracnoses were being studied when this one on the dracæna was found. Pure cultures of it were obtained for comparison with the others. Conidia began to develop in the cultures when they were only a day old. These conidia were borne on the ends of hyphae from the sides of the filaments of the radiating mycelium. A little later, acervuli began to appear in the cultures, the mature conidia collecting in little pinkish masses on the surface of the culture medium.

Developing along with, and for some time after, the acervuli, were small black bodies resembling young acervuli; these bodies proved to be perithecia, containing long, slender paraphyses and club-shaped ascii with hyaline, single-celled spores. In size and general appearance, the conidia and ascospores were alike except that most of the ascospores were slightly curved. The perithecia varied from spherical to flask-shaped and long-rostrate, the long-rostrate forms being for the most part deeper in the culture medium. There was a tendency to produce only the perithecial stage after the fungus had been grown for several generations on artificial media.

After perithecia were obtained in the cultures, the leaves were examined and patches of perithecia were found on them. Pure cultures were then obtained from some of these perithecia, and both conidial and perithecial stages developed from the ascospores, proving that the acervuli and perithecia on the leaves were stages of the same fungus.

Inoculation experiments were now begun by inoculating pieces of sterilized bean stems with conidia from the pure cultures. In a few days acervuli began to show on the bean stems, and later, perithecia. These perithecia were superficial, somewhat hairy and flask-shaped, while those on the dracæna leaves were sub-epidermal and sub-spherical.

Three plants of *Dracaena fragrans* were placed side by side in the greenhouse. After waiting several weeks to see whether they had the same disease, two of them were inoculated with conidia from a pure culture. Several of the leaves were killed back from the tips from one to three inches and one had a spot on it. Acervuli developed in all the dead areas and perithecia in one. The fungus was transferred from the inoculated plants to the third by spraying them with a hose. The fungus spread very rapidly on the infected leaves when they were removed and placed in a moist chamber, acervuli and perithecia developing in abundance.

I am in doubt about the taxonomy of this fungus. Dr. Halsted² called it a species of *Gloeosporium*, and so it seems to

² l. c.

be in one of its conidial stages, but where does its perithecial stage belong? Species of *Gloeosporium*, and their near kin, the *Colletotrichums*, are so common that it does seem as if some one must have found the perithecial stage of a few of them and described them as species of long-established genera. This might have been done without a knowledge of the acervial stage. There are a few records of species of *Laestadia*, *Physalospora*, and the comparatively new genus *Glomerella* with known conidial stages of species of *Gloeosporium* and *Colletotrichum*; there is also a considerable number of hosts which have species of *Gloeosporium* and *Colletotrichum* (one or both) and species of *Laestadia* and *Physalospora* (one or both) occurring upon them, but whether any relationship exists between these acervial and perithecial stages is probably unknown.

This fungus, which causes the leaf-tip blight of *Dracaena fragrans*, is very similar to species of *Laestadia*, *Physalospora*, and *Glomerella* having both acervial and perithecial stages, especially *P. Vanillae* A. Zimmerm., *P. Catileyae* Maubl. & Lasnier, and the apparently composite species *Glomerella rufomaculans* (Berk.) Sp. & v. Schr. If the presence of paraphyses is taken into consideration, it cannot be a species of *Laestadia*, since this genus is not paraphysate; neither can it be a species of *Glomerella*, as this genus was originally described,³ for the perithecia in the leaves and many of the cultures are simple instead of "caespitose or more or less compound and immersed in a stroma" and paraphysate instead of "aparaphysate." Since it corresponds more nearly to the genus *Physalospora* than to either *Laestadia* or *Glomerella*, it is placed in this genus for the present and the name *Physalospora Dracaenae* n. sp. proposed.

West Virginia Experiment Station,
Morgantown, W. Va., June 10, 1907.

³ Schrenk, Hermann von and Spaulding, Perley. The bitter-rot of apples. Bul. U. S. Dept. Agr. Bu. Pl. Ind. 44:29. 1903.

THE MYCOLOGICAL WRITINGS OF THEODOR HOLMSKJOLD AND THEIR RELATION TO PERSOON'S COMMENTATIO.

ELIAS J. DURAND.

The writer has had occasion recently to gather information concerning the writings of Theodor Holmskjold and their relation to Persoon's *Commentatio de fungis clavaeformibus*. The desired facts were finally obtained with some difficulty, and then only after considerable time had been spent in looking through literature in several libraries. Some of the publications consulted are rare in American collections, and there is reason to believe that they are not common in those of Europe. Since the facts obtained have already been found to be of value to several workers it seems desirable to put them on record in the hope that they may be of interest to some other mycologists.

Theodor Holm, or Holmskjold, to give him his title of nobility, was born in Nyborg, Denmark, June 14, 1732, and died at Copenhagen, September 14, 1794. His only important mycological work was a volume published at Copenhagen, in 1790. I have not seen a copy of this first edition, but according to Persoon it bore the title: *Beata ruris Fungis danicis a Theodoro Holmskjold impensa*. There is every reason to believe that it bore also the secondary title "Coryphaei clavarias ramariasque complectentes cum brevi structurae interioris expositione." It was in folio form with 118 pages of text in both Danish and Latin in parallel columns, and accompanied by 33 plates in color with elaborate explanation. Since the volume was issued for private circulation only and was not offered for sale very few copies came into the hands of the public. At the death of the author distribution ceased entirely. This work was regarded as of great value by Persoon, and was regularly referred to by him as "*Holmsk. Coryph.*", but mention of it is not common in the writings of other authors.

Holmskjold's work was first made generally accessible in 1795 when the latin text was printed in Usteri's *Annalen der Botanik* of which it constituted pages 30-149 of Stück 17. This article bore the title *Coryphaei*, etc., as above. This and the next were in octavo form.

Two years later, in 1797, Persoon published in separate form a new edition of Holmskjold's work under the following title: "Coryphaei clavarias ramariasque complectentes cum brevi structurae interioris expositione auctore Theodoro Holmskjold. Denuo cum adnotacionibus editi nec non commentatione de fungis clavaeformibus aucti a C. H. Persoon." There were 239 pages illustrated by 4 colored plates. Pages 1-119 of this volume

correspond very closely to the text printed in Usteri's *Annalen*, with the publication of which Persoon did not seem to have been acquainted at the time since he made no mention of it. Persoon's "adnotationes" occupied pages 120-130, while the "Commentatio de fungis clavaeformibus" constituted pages 133-236 of the text, pages 237-239 being explanations of the four colored plates.

In the same year (1797) Persoon's *Adnotationes* and *Commentatio* alone were printed separately by the same publisher (Wolf), and under the title: "C. H. Persoonii *commentatio de fungis clavaeformibus sistens specierum hucus usque notarum descriptions cum differentiis specificis, nec non auctorum synonymis.*" There were 124 pages of text with 4 colored plates. While I have not collated the texts, pages 1-104 correspond page for page to pages 133-236 of the volume mentioned in the last paragraph, except that on pages 101-104 a slight difference in the spacing of some of the paragraphs makes a slight change in the lines on the pages. The "adnotationes" occupied pages 107-116. The explanation of figures on pp. 117-118 is more condensed, while the addenda, pp. 105-106, and the indices, pp. 119-124, are new matter. The 4 plates are the same.

This separate publication of the *Commentatio*, Persoon said, was intended for the convenience of those who already possessed the 17th fascicle of Usteri's *Annalen* in which Holmskjold's *Coryphaei* had appeared.

After the death of Holmskjold, in 1794, his effects were sold at auction, and the whole edition of his 1790 publication together with all his descriptive notes and copper plates were purchased by the agent of the king. From these manuscripts a second volume treating of the other groups of fungi was prepared under the editorship of Eric Viborg, so that in 1799 the "*Beata ruris*" was issued in two volumes. Whether volume one of this work consisted of the remaining undistributed copies of the 1790 publication or was a reprint from the original plates could not be determined. The work does not seem to be very rare and is frequently referred to in mycological literature.

From what has been said it will be noted that Holmskjold's text has appeared in four forms: (1) as a privately distributed folio volume with plates, 1790; (2) as a contribution to Usteri's *Annalen* without plates, 1795; (3) as a volume edited by Persoon without plates, 1797; (4) as volume 1 of "*Beata ruris*," etc., with plates, 1799. Persoon's *Commentatio* appeared first in his edition of Holmskjold, 1797, and in the same year as a reprint from the last with a modified title and slightly modified text.

NORTH AMERICAN SPECIES OF AGARICACEAE.

A. P. MORGAN.

THE MELANOSPORAE. (Continued.)

(Continued from page 62.)

III. DECONICA W. SMITH, JOURNAL OF BOTANY, 1870.

Pileus fleshy, thin, convex then expanded, the surface smooth and glabrous, the margin at first incurved. Stipe subcartilaginous, fistulous, smooth or fibrillose. Lamellae very broad, adnate, or subdecurrent, becoming purple or brown; spores purplish-brown or purplish-black.

This genus is intended to correspond to *Omphalia* in the *Leucosporae*; it is a subsection of *Psilocybe* in the arrangement of Fries.

I. COPROPHILAE. *Growing on manure or in rich soil in fields, pastures, etc.*

a. *Pileus smooth, not striatulate.*

1. DECONICA COPROPHILA BULLIARD, HERB. FR. 1791. COOKE, ILLUSTR. 608.

Pileus fleshy, hemispheric then expanded, umbonate, smooth and glabrous, alutaceous, rufescent.

Stipe tapering upward, fistulous, pruinose at the apex, glabrate. Lamellae arcuate-subdecurrent, broad, livid-brown; spores 13-14 x 8 mic.

Growing on dung heaps and in pastures. Probably common everywhere. Pileus 2-4 cm. in diameter; stipe 5-8 cm. long, 2-3 mm. thick. Stipe at first short and flocculose, becoming elongated, glabrous and shining.

2. DECONICA DIGRESSA, PANAEOLUS DIGRESSUS PECK, BULL. TORR. CLUB, 1895. SYLLOGE XIV, 161.

Pileus hemispheric or convex, glabrous, red-brown. Stipe short, fistulous, striate at the apex, toward the base floccose-fibrillose, paler than the pileus. Lamellae very broad, distant, adnate, purple-black, the edge whitish; spores broadly elliptic, 13-15 x 9-10 mic.

Growing on manure. California, McClatchie. Pileus 1-1.5 cm. in diameter; stipe 2-3 cm. long, 2-3 mm. thick.

b. *Pileus striatulate, at least when wet.*

3. DECONICA BULLACEA BULLIARD, HERB. FR. 1791.
COOKE, ILLUSTR. 608.

Pileus fleshy, hemispheric then expanded, glabrous, at length umbonate, striatulate to the middle, tawny-brown, glutaceous when dry. Stipe short, fistulous, equal, fibrillose, yellowish, at the base brown-ferruginous. Lamellae adnate, triangular, plane, close, brown-ferruginous; spores elliptic, 7-9 x 5-6 mic.

Growing on manure and in rich soil. Michigan, *Kauffman*. Pileus 2-2.5 cm. in diameter, stipe 2-3 cm. long, 2-3 mm. thick. A smaller plant with smaller spores than *D. coprophila*.

4. DECONICA SCATIGENA B. & C., FUNGI CUB. 1867.

Pileus convex, yellow-brown. Stipe glabrous above, at the base tomentose. Lamellae broad, adnate by a tooth; spores minute.

Growing on manure. Cuba, *Wright*. Pileus 6-7 mm. in diameter; stipe 2 cm. high, 2 mm. thick. The minute spores distinguish this species from *D. bullacea*.

5. DECONICA SUBVISCIDA PECK, 41 N. Y. REP., 1887.

Pileus thin, subconical then convex or nearly plane, often slightly umbonate, glabrous, hygrophanous, pale chestnut or reddish tan color, slightly viscid when moist and striatulate, pallid or dull buff when dry. Stipe equal or tapering downwards, fibrillose, hollow, brownish toward the base, paler above. Lamellae broad, subdistant, adnate or subdecurrent, at first whitish then brownish ferruginous; spores ovoid, brown, 7-8 x 5 mic.

Growing on horse manure and in rich soil. New York, *Peck*. Pileus 6-12 mm. in diameter; stipe 2-3 cm. long, 2 mm. thick. The species is closely related to *D. bullacea*; it is gregarious and in wet weather appears in great abundance and in successive crops.

II. AMMOPHILAE. *Growing in sand and gravel in woods and open places.*

a. *Growing among mosses.*

6. DECONICA POLYTRICHOPHILA, PSATHYRA POLYTRICHOPHILA PECK, 30 N. Y. Rep. 1877.

Pileus thin convex, or subcampanulate, glabrous, fragile, hygrophanous, brown and striatulate when moist, buff or dull ochraceous when dry. Stipe slender, equal, subflexuous, stuffed,

concolorous, mealy at the summit, white fibrillose below. Lamellae broad, sub-distant, adnate or subdecurrent, colored almost like the pileus; spores purple-brown, subelliptic, $7-8 \times 5$ mic.

Growing on the ground among *Polytrichum*. New York, Peck. Pileus 4-10 mm. in diameter; stipe 3-5 cm. long.

7. *DECONICA BRYOPHILA* PECK, 46 N. Y. Rep. 1892.

Pileus submembranaceous, somewhat conical, becoming convex or nearly plane, glabrous, hygrophanous, brown and striatulate on the margin when moist, pallid or grayish when dry. Stipe slender, fistulous, silky-fibrillose, pallid or brown. Lamellae broad, distant, adnate or subdecurrent, at first pale brown, becoming purplish-brown; spores brown, elliptic, $7-8 \times 5$ mic.

Growing in sandy soil among mosses. New York, Peck. Pileus 6-12 mm. in diameter; stipe 1.5-2.5 cm. long.

b. *Not growing among mosses.*

8. *DECONICA ATRORUFA* SCHAEFFER, INDEX 1774.
AGARICUS MONTANUS PERSOON, SYNOPSIS, 1801.

Pileus fleshy, hemispheric-convex, obtuse, glabrous, dark rufous or purple brown, the margin striatulate, when dry smooth and expallent. Stipe slender, equal, fistulous, glabrous or fibrillose, pale brown. Lamellae broad, subdecurrent, umber; spores ovoid, $6-8 \times 4-5$ mic.

Growing in open sandy, gravelly places and in woods. N. Carolina, Schweinitz. Pileus 1-2 cm. in diameter; stipe 3-5 cm. long, 2 mm. thick.

9. *DECONICA AMMOPHILA* DURIEU ET LEVEILLE,
EXPL. SCIENTIFIQUE DE L' ALGERIE. COOKE ILLUSTR. 606.

Pileus fleshy hemispheric, then expanded, subumbonate, glabrous, yellowish-brown. Stipe tapering upward from an elongated clavate base sunk in the sand, the upper portion white and hollow. Lamellae rather narrow, subdecurrent by a tooth, smoky, black-pulverulent; spores elliptic, $8-10 \times 5-6$ mic.

Growing in the sand along the Ohio river, Morgan, and near Lake Erie, Kellerman. Pileus 3-4 cm. in diameter; stipe 4-6 cm. long. The rooting base emits fibrous rootlets which clothe it with a layer of sand.

10. *DECONICA SEMISTRIATA* PECK, 51 N. Y. Rep.
1897.

Pileus fleshy, thin except on the prominent, broadly umbonate disk, glabrous, striatulate, grayish brown, paler when dry, the umbo yellowish. The stipe short, equal, stuffed, floc-

cose, fibrillose, concolorous with the pileus. Lamellae broad, subdistant, adnate or subdecurrent, purplish brown, the edge whitish; spores compressed, orbicular, $6-8 \times 6$ mic.

Growing on damp ground in woods. New York, *Peck*. Pileus 8-10 mm. in diameter; stipe 1.5-2.5 cm. long, 1 mm. thick.

III. TROPICALES. *Growing on old leaves, herbaceous stems, etc.*

11. DECONICA BULBOSA PECK, 46 N. Y. Rep. 1892.

Pileus submembranaceous, convex becoming nearly plane, glabrous, striatulate around the margin, whitish tinged with brown. Stipe firm, slender, fistulous, grayish-fibrillose, arising from a bulbous base. Lamellae broad, distant, adnate, purplish-brown; spores purplish-brown, elliptic, $7-8 \times 5$ mic.

Growing on dead stems or herbs. New York, *Peck*. Pileus 6-12 mm. in diameter; stipe 1.5-2.5 cm. long, scarcely 1 mm. thick.

12. DECONICA MODESTA, HYPHOLOMA MODESTUM PECK, 32 N. Y. Rep. 1879. Sylloge, IX, 139.

Pileus thin, convex or subconic, at length expanded, rarely subumbonate, glabrous, hygrophanous, when wet reddish brown or pale chestnut, when dry dark ochraceous-brown, the margin at first whitish, sometimes striate. Stipe equal, hollow, fibrillose, brownish. Lamellae plane, broad, adnate or somewhat emarginate, commonly decurrent by a tooth, at first gray or nebulous, afterward purplish-brown, the edge white; spores purple-brown, broadly ovate, compressed, 6-8 mic. long.

Growing on fallen branches in woods. New York, *Peck*. Pileus 8-10 mm. in diameter; stipe 2-3 cm. long, about 2 mm. thick.

IV. PSATHYRA FRIES, SYST. MYC. I, 1821.

Pileus submembranaceous, conic or campanulate, fragile, hygrophanous, the margin at first straight and pressed close against the stipe. Stipe subcartilaginous, fistulous, fragile. Lamellae adnexed or adnate, becoming purple or brown; spores in mass purplish-brown or purplish black, sometimes brown.

Growing commonly in grassy grounds and in shaded places. Corresponding to *Mycena* in the *Leucosporae*.

I. CONOPILAE. *Surface of the pileus smooth and glabrous, even or striatulate. Stipe polished and shining.*

a. *Surface of the pileus even or only rugulose.*

I. PSATHYRA LIMBATA, AGARICUS LIMBATUM HOLMSKIOLD, BEATA OT. II. 32; AGARICUS CORRUGIS PERSOON, DISP. METH. FUNG. 1797; COOKE, ILLSTR. 576, 592.

Pileus submembranaceous, campanulate, umbonate, subrugose, glabrous, rose-color or pale flesh-color when moist, becoming pallid when dry. Stipe fistulous, equal, smooth and glabrous, whitish or rufescent. Lamellae sinuate-attached, ventricose, violaceous then blackening; spores elliptic-oblong $12-14 \times 6-8$ mic.

Growing in gardens and woods. Pacific Coast Cat. Pileus 2-4 cm. in diameter; stipe 5-10 cm. long, 2-3 mm. thick.

2. PSATHYRA CONOPILA FRIES, SYST. MYC. I. 504. BERKELEY OUTLINES, 173.

Pileus submembranaceous, campanulate, smooth and glabrous, whitish becoming pallid. Stipe tall tapering upward, glabrous, silvery shining. Lamellae slightly adnexed, close, brown becoming purple; spores $14 \times 7-8$ mic.

Growing in grassy grounds and gardens. N. Carolina, Schweinitz. Pileus 2-3 cm. in diameter; stipe 10-15 cm. long, 2-4 mm. thick.

3. PSATHYRA BULBILLOSA FRIES, NOVAE SYMB. MYC. 1851.

Pileus fleshy, elongate-conic, smooth and glabrous, dirty-yellow or tawny brown. Stipe fistulous, smooth, glabrous, yellowish, arising from a bulbous base. Lamellae ascending, linear, brown then blackening.

Growing on the ground, near Cartago, Costa Rica, Oersted, Ic. 13. Pileus 1-1.5 cm. in diameter; stipe 2-3 cm. long, 2-3 mm. thick. It recalls to mind *Psilocybe callosa* but is a firmer plant.

4. PSATHYRA PSEUDOTENERA FRIES, NOVAE SYMBOLAE MYC. 1851.

Pileus fleshy, campanulate, smooth and glabrous, fulvous becoming pallid. Stipe fistulous, equal, naked, at the apex whitish, downward ferruginous. Lamellae ascending, close, brown.

At Naranjo in Costa Rica. OERSTED. Ic. 14. Pileus 2-3 cm. high and broad; stipe 5-6 cm. long, 2 mm. thick. With the habit of *Galera tenera* or rather of *G. siliquinea* but of firm texture and the lamellae fuscous.

5. PSATHYRA OBTUSA, AGARICUS OBTUSUS PERSOON,
SYNOPSIS 1801. Ps. OBTUSATA FRIES, SYST. MYC. 1821.

Pileus submembranaceous, campanulate then expanded, obtuse, glabrous, wrinkled, hygrophanous, umber, paler when dry. Stipe fistulous, equal, smooth, nearly naked, pallid, incurved at the base. Lamellae adnate subdistant, subventricose, pallid then umber; spores elliptic-oblong, $7-9 \times 4-6$ mic.

Simple and caespitose; growing on old trunks. Recorded in various parts of the country. Pileus 2-3 cm. in diameter; stipe 5-8 cm. long, 2-4 mm. thick. It is a smaller plant than *Psilocybe spadicea* with which it was figured by Schaeffer.

6. PSATHYRA CONICA PECK, 54 N. Y. REP. 1900.

Pileus thin conical, rarely convex, glabrous, hygrophanous, dark brown, pale ochraceous when dry. Stipe slender, fistulous, silky, fibrillose, brown. Lamellae very broad, close, adnate, at first whitish or pallid, at length dark brown; spores elliptic, $5-6 \times 4$ mic.

Growing on old prostrate trunks of spruce. New York, Peck. Pileus 8-12 mm. in diameter; stipe 2.5-4 cm. long, 1 mm. thick.

b. *Margin of the pileus striate, at least when wet.*

7. PSATHYRA SPADICEO-GRISEA SCHAEFFER, INDEX, 1774. AGARICUS STIPATUS, FLORA DANICA.

Pileus submembranaceous, conic, campanulate then expanded, subumbonate, glabrous, striate to the middle, hygrophanous, brown then gray. Stipe firm, tapering upward, shining, white, striate at the apex. Lamellae adnexed, rather close, narrow, brown; spores 8-10 mic. long.

Growing on and about old trunks and rotten wood. Carolina and Pennsylvania, Schweinitz. Pileus 5-7 cm. in diameter, stipe 7-9 cm. long, 3-4 mm. thick. Simple end subcaespitose.

8. PSATHYRA GYROFLEXA FRIES, EPICRISIS, 1836.
COOKE, ILLUSTR. 970.

Pileus membranaceous, conic, campanulate, striate, atomate, gray, rufescent in the center, becoming pallid. Stipe slender, flexuous, silky-shining, white. Lamellae narrow, close, adnexed, purplish-gray; spores dark purple, $8-10 \times 4-5$ mic.

Subcaespitose; growing along the grassy margins of woods. Cuba, Wright. Pileus 1.0-1.5 cm. in diameter; stipe 4-6 cm. long, about 2 mm. thick. With almost the habit of *Psathyrella pallescens*.

9. PSATHYRA FLAVOGRISEA BERKELEY, ANN. N. H. 1845.

Pileus membranaceous, conic-campanulate, at first tawny-alutaceous, at length the margin sulcate and gray. Stipe slender, flexuous, white, fistulous. Lamellae alutaceous becoming purple, distant, ventricose, adnexed; spores elliptic, purple-brown.

Growing among dead leaves. Nebraska, *Clements*. Pileus 2-3 cm. in diameter; stipe 5-8 cm. long, 2 mm. thick. Closely related to *Ps. gyroflexa*.

10. PSATHYRA FAGICOLA LASCH, LINNAEA III, 1828.

Pileus membranaceous, campanulate, obtuse, striatulate, viscid, bluish to brownish. Stipe equal, fragile, fibrillose, furfuraceous, becoming pallid. Lamellae adnexed, seceding, subluminescent, brown; spores brown.

Subcaespitose; growing on trunks of Beech trees. N. Carolina, *Curtis*. Pileus 3-5 cm. in diameter; stipe 5-6 cm. long, 4-6 mm. thick.

11. PSATHYRA EPIBATES FRIES, NOVAE SYMB. MYC. 1851.

Pileus membranaceous, rather tough, parabolic, glabrous, egg-yellow, striate around the margin. Stipe fistulose, almost capillary, smooth, glabrous, egg-yellow, arising from an orbicular base. Lamellae ascending, brown.

Growing on rotten wood at Naranjo, Costa Rica, OERSTED, Ic. 10. Pileus parabolic (taller than broad) 4-6 mm; stipe about 2 cm. long. The base of the stipe resembles that of *Myxena stylobates*.

12. PSATHYRA SILVATICA PECK, 42 N. Y. REP.

Pileus membranaceous, campanulate, glabrous, viscid, hygrophanous, dark brown and striatulate when moist, grayish-brown when dry. Stipe slender, fistulous, subflexuous, brown. Lamellae broad, ascending, subdistant, ferruginous-brown with a white edge; spores brown, 10 x 6 mic.

Growing on mossy ground in woods. New York, *Peck*. Pileus 8-10 mm. in diameter; stipe 3-5 cm. long, 1 mm. thick.

13. PSATHYRA UMBONATA PECK, 50 N. Y. REP.

Pileus submembranaceous, campanulate, umbonate, hygrophanous, purplish-brown and striatulate when moist, grayish-white when dry, atomate. Stipe slender, flexuous, hollow, white, slightly mealy at the summit, tomentose at the base. Lamellae

rather broad, ventricose, subadnate, brownish-red, becoming purplish-brown; spores blackish-brown, $12-15 \times 7-8$ mic.

Growing among chip dirt. New York, Peck. Closely related to *Ps. limbata*. The umbo is very prominent.

14. *PSATHYRA SULCATA*, *PSATHYRELLA SULCATA* CLEMENTS, NEB. REP. III. 1893.

Pileus campanulate then expanded, smooth and yellow in the center, gray verging into black beyond and deeply radiately sulcate. Stipe slender, fistulous, smooth, shining, white above, rufescence below. Lamellae adnexed, slightly ventricose, cinereous, then brownish-black; spores ovoid, fuscous or brownish-purple. $8-10 \times 5-6$ mic.

Growing on the ground. Lincoln, Neb., Clements. Pileus $1-2.5$ cm. in diameter; stipe $4-6$ cm. long, $1-2$ mm. thick.

15. *PSATHYRA HYMENOCEPHALA*, A. (HYPHOLOMA) *HYMENOCEPHALUS* PECK, 31 N. Y. REP. 1878.

Pileus thin, fragile, campanulate, then expanded, sometimes umbonate, hygrophanous, brown and striatulate when moist, pallid or whitish and radiately rugulose when dry, subatomic; the whitish veil evanescent. Stipe slender, brittle, hollow, striate and mealy at the summit, white. Lamellae narrow, close, dingy then brown; spores brown, elliptic, $7-8 \times 4$ mic.

Growing on the ground in the shade of alders. New York, Peck. Pileus $3-5$ cm. in diameter; stipe $7-10$ cm. long, $2-3$ mm. thick. Apparently referable to *Psathyra* in every way except the slight evanescent veil.

II. FIBRILLOSAE. *Pileus and stipe from the first floccose-scaly or fibrillose.*

a. *Pileus striatulate, at least when wet.*

16. *PSATHYRA FIBRILLOSA* PERSOON, SYNOPSIS, 1801. FRIES HYM. EUR. 1874. KARSTEN, HATTSVMPAR.

Pileus submembranaceous, campanulate-convex then expanded, striatulate, at first fibrillose, livid, white when dry. Stipe elongated, very fragile, white, fibrillose-scaly. Lamellae adnate, plane, very broad behind, purple-black, spores dark purple.

Growing on the ground among old leaves. New England, Frost. Pileus $3-4$ cm. in diameter, the lamellae $7-11$ mm. broad, stipe $8-12$ cm. long, $4-7$ mm. thick. Berkeley's figure in Cooke's Illustrations does not appear to be this species.

17. PSATHYRA NOLI-TANGERE FRIES, EPICRISIS,
1836. FRIES, ICONES, 138, COOKE, ILLUSTR. 612.

Pileus membranaceous, campanulate then expanded, radially striate, scaly around the margin, hygrophanous, pale umber, becoming pallid when dry. Stipe very fragile, nearly naked, smooth at the apex, brownish. Lamellae broad, adnate, pale brown; spores elliptic-oblong, 12×5 mic.

Gregarious; growing among oak chips. Pacific Coast Cat. Pileus 2-2.5 cm. in diameter; stipe 2-3 cm. long, 2 mm. thick. An extremely fragile species.

18. PSATHYRA PHOLIDOTA MONTAGNE, SYLLOGE CRYPT. 1856.

Pileus membranaceous, campanulate then expanded, scaly in the center, the margin striatulate, violaceous. Stipe fistulous, nearly equal, silky-fibrillose, concolorous with the pileus. Lamellae rather narrow, attenuate-attached, purplish, at length fuliginous; spores oblong, $12-13$ mic. in length.

Caespitose; growing in grassy ground. Columbus, Ohio, Sullivant. Pileus 1-3 cm. in diameter; stipe 4-8 cm. long, 2-3 mm. thick. The whole fungus violaceous, fragile and evanescent.

19. PSATHYRA PLUMIGERA B. & C. FUNGI CUB.
1867.

Pileus convex, then plane, pubescent, striatulate, brown, clothed with white scales; the umbo obtuse. Stipe slender, fragile, fistulous, subpellucid, white. Lamellae broad, adnexed, brown.

Growing on sticks in woods. Cuba, Wright. Pileus 12 mm. in diameter; stipe 3.5-4 cm. high, 2 mm. thick.

20. PSATHYRA SENEX, PSILOCYBE SENEX PECK, 41 N.Y. REP. 1887.

Pileus thin hemispherical, obtuse, hygrophanous, dark brown and striatulate when moist, pale cinereous and shining when dry, somewhat squamose with superficial subfasciculate whitish fibrils, the margin appendiculate with the same. Stipe slender, hollow, fragile, minutely floccose-pruinose, subpellucid, white. Lamellae broad, subdistant, adnate, at first grayish, then brown or blackish-brown, the edge white; spores brown, elliptic, $7-8 \times 5$ mic.

Growing on decayed wood in woods. New York, Peck. Pileus 1-2 cm. in diameter; stipe 4-7 cm. long, 2 mm. thick.

21. PSATHYRA OBSCURA, PSILOCYBE OBSCURA PECK.
BULL. TORR. CLUB. 1897.

Pileus thin, convex, hygrophanous, striatulate, brown or reddish-brown, more or less flecked or scurfy with a white floccose tomentum. Stipe slender, fistulous, a little paler than the pileus, whitish-tomentose at the base. Lamellae broad, subdistant, adnate, brown becoming almost black, the edge white; spores elliptic, $10-13 \times 6-8$ mic.

Growing in rich leaf mold in woods. Kansas, *Bartholomew*. Pileus 1-2 cm. in diameter; stipe 2.5-4 cm. long, 2 mm. thick.

22. PSATHYRA SUBNUDA KARSTEN, SYMB. MYC. X. 60.

Pileus thin, fragile, conic-convex then expanded, umbonate, atomate, striatulate, with a few fugacious fibrils, pallid or pale livid, whitish when dry. Stipe fistulous, straight, at first slightly silky, villous at the base, becoming smooth and shining, white or whitish. Lamellae close, subventricose, adnate, at first pale cinereous with a tinge of violet, at length brown; spores fuscous, elliptic, $8-9 \times 4$ mic.

Growing on the grounds in woods. Preston, Ohio. Pileus 4-6 cm. in diameter; stipe 7-10 cm. long, 2-4 mm. thick.

23. PSATHYRA MIAMENSIS MORGAN SP. NOV.

Pileus submembranaceous, thin and fragile, convex then explanate, striate nearly to the center, rufescent, at an early stage the surface ornamented with tufts of white flocci, which soon disappear. Stipe arising from a white mycelial bulb, tapering upward, fistulous, rufescent beneath the white-fibrillose cuticle. Lamellae broad, rather distant, adnate, pallid then fuliginous; spores purplish-black, elliptic-oblong, $9-11 \times 6-7$ mic.

Growing in loose sand along the Miami river; Preston, Ohio. Pileus 1.5-2.5 cm. in diameter; stipe 3-4 cm. in length and 2-3 mm. thick. The species seems most nearly related to *Ps. helobia* Kalch.

b. Pileus not striatulate.

24. PSATHYRA MICROSPERMA PECK, BULL. TORR. CLUB. 1899. SYLLOGE XVI, 126.

Pileus ovoid or subhemispheric then convex or subcampanulate, obtuse, smooth, hygrophanous, brown, paler when dry, at first flocculose; the flesh brownish. Stipe equal, hollow, fibrillose. Lamellae close, adnate, brown; spores brown, elliptic, $5-6 \times 3-4$ mic.

Growing around old stumps. Ohio, *Lloyd*; Michigan, *Kauffman*. Caespitose; pileus 1-2.5 cm. in diameter; stipe 2.5-3 cm. long, 2-3 mm. thick.

25. *PSATHYRA TIGRINA* PATOUILLARD, BULL. SOC. MYC. 1899.

Pileus at first ovoid, white, covered with brown or blackish scales, afterward campanulate, smooth or scarcely striatulate and villous, finally diffused and purple-brown. Stipe cylindric, slender, fragile, white. Lamellae linear, whitish, afterwards becoming purple; spores purple, ovoid, $7-10 \times 5-8$ mic.

Growing on rotten trunks, Guadalupe, Duss. Plant 3-5 cm. high; related to *Ps. gyroflexa*.

26. *PSATHYRA VESTITA* PECK, N. Y. REP. 1905.

Pileus submembranaceous, ovoid, conic or sub-campanulate, obtuse, rufescent, when young clothed with white floccose fibrils, soon paler or white and silky-fibrillose. Stipe equal, flexuous, hollow, fibrillose, white. Lamellae narrow, close, adnate, at first white, becoming blackish-brown; spores purplish-brown, elliptic, $8-10 \times 5-6$ mic.

Growing among fallen leaves and grass. New York, Peck. Pileus 1-1.5 cm. in diameter; stipe 2.5-4 cm. long. 2-3 mm. thick.

27. *PSATHYRA ATOMATOIDES*, A. (PSILOCYBE) ATOMATOIDES PECK, 29 N. Y. REP. 1876.

Pileus rather thin, fragile, subcampanulate or convex then expanded, rugulose, subhygrophanous, atomate, grayish or ochraceous-brown, at first clothed with tufts of white flocci, which are fugacious. Stipe equal, fistulous, when young minutely floccose-scaly, pruinose at the summit, whitish. Lamellae rather broad, subventricose, rounded behind, cinereous then dark brown; spores subelliptic, blackish-brown, $7-8 \times 4$ mic.

Growing on the ground and on decaying wood under pine and hemlock trees. New York, Peck. Pileus 1.5-2.5 cm. in diameter; stipe 4-5 cm. long, 2 mm. thick.

(*To be continued.*)

THIRD SUPPLEMENT TO NEW GENERA OF FUNGI
 PUBLISHED SINCE THE YEAR 1900, WITH
 CITATIONS AND THE ORIGINAL
 DESCRIPTIONS.

COMPILED BY P. L. RICKER.

(Concluded from page 124.)

VII. BASIDIOMYCETAE.

[Basidiomycetae.]

GALLACEA Lloyd, n. g. Lycoperdaceae. The Lycoperda-
 ceae of Australia, New Zealand and neighboring islands. 37
 1905.

"Peridium single. Gleba of permanent cells forming a
 thin layer adhering to the peridium, the plant being hollow at
 the center; capillitium none; spores fusiform."

"This genus is based on 'Mesophellia scleroderma' (Grev.
 14-II.)."

[Basidiomycetae.]

WHETSTONIA Lloyd, n. g. Tylostomaceae. Mycological
 Notes 22: 270. pl. 90. 1906.

"Peridium stalked, distinct from the stalk by a definite
 membrane. Gleba consisting of spores contained in persistent
 cells. Capillitium none."

[Basidiomycetae.]

HIRNEOLINA (Pat.) Bres. n. g. Tremellaceae. Saccardo,
 Sylloge Fungorum, 17: 208. 1905.

As a subgenus of Sebacina, Patouillard, Essai Taxonomique,
 25, f. 17. 1900. Replacing Eichleriella Bresadola, Annales My-
 cologici 1: 116. 1903.

[Basidiomycetae.]

GRANDINIOIDES Bunker, n. g. Hydnaceae. Memoirs of the
 Torrey Botanical Club, 12: 179. 1906.

"Plant pileate, thin, membranaceous or subgelatinous, teeth
 minute, papilliform or subcylindrical, subciliate."

[Basidiomycetae.]

LEAIA Bunker, n. g. Hydnaceae. Memoirs of the Torrey
 Botanical Club, 12: 175. 1906.

"Plants pileate or resupinate, epixyloous, dark to light-umber
 or grayish, subculum of branched processes clothed above with a
 dense shaggy coat of coarse tomentum; teeth slender, terete,
 acute; spores minutely papillose, elliptical, guttulate, hyaline or
 white."

VIII. DEUTEROMYCETAE.

[Deuteromycetae.]

ANAPHYSMENE Bubak, n. g. Melanconiaceae. Annales Mycologici 4:124. f. 1-5. 1906.

"Stroma tuberkelartig, im unteren Teile pseudoparenchymatisch, im oberen aus senkrechten Zellenreihen gebildet, subepidermal; Konidienträger aus dem Innern der dekapiptierten obersten Stromazellen hervorwachsend, einfach, hyalin; Konidien, mehr oder weniger gebogen, 2-zellig, hyalin, akrogen.

"Fruchtlager durch einen längsspalt geöffnet."

[Deuteromycetae.]

ASCOCHYTOPSIS Henn. n. g. Sphaeropsidaceae. Bot. Jahrbücher für Systematik, Pflanzengeschichte und Pflanzengeographie 39:117. 1905.

"Stromata superficialia subcarbonacea atra, 1-paucilocularia, conidia falcata, pluriguttulata, hyalina. Ascochytae similis, Septoriellae diversa."

[Deuteromycetae.]

BOTRYOCONIS Syd. n. g. Melanconiaceae. Annales Mycologici 4:344. 1906.

"Acervuli primo subcutanei (ut videtur), demum erumpentes, pulvinato-effusi. Conidia in capitula unita vel botryosagggregata, colorata, continua. Drepangoni Schroet. et P. Henn. videtur affinis."

[Deuteromycetae.]

CORYNESPORA Güssow, n. g. Dematiaceae. Zeitschrift für Pflanzenkrankheiten, 16:13. 1906.

Die conidien werden terminal an langen septierten conidiophoren in Ketten gebildet und sind untereinander und mit den conidiophoren durch kurze hyaline zwischenstücke verbunden. Die Kettenform ist überaus vergänglich, und nur ein Conidie bleibt am Conidiophor sitzen. In diesem Zustande kann eine Verwechslung des Pilzes mit Cercospora nur dan möglich sein, wenn man das charakteristische glasige Zwischenstück, mit welchem die Sporen aufsitzen, unbeachtet lässt. Die Conidien haben vorherrschend die Form einer Keule, jedoch kommen sehr verschiedene Variationen vor; ihre Färbung ist etwas heller wie die der conidiophoren, ihre Oberfläche nällig glatt und die derbe, dicke Zellwand ist an den Septen nicht eingeschürt. . . . Die vegetativen Hyphen sind fast farblos, oder doch bedeutend blasser wie die Sporen, welche wie vorher bemerkt, heller wie die Conidienträger sind. . . .

Sporen, welche ich von befallnen Blättern auf eine agaragar oder Gelatine mit einer sterilen Abkochung von Karotten säte, Keimten nach 6 Stunden an den beiden Endzellen aus; ich

habe niemals Keimschlauche von Zwischenzellen entspringen sehen, auch nicht in Tage lang beobachteten Sporen in Wasser, dem eine geringe Quantität nährlosung beigegeben wurde.

[Deuteromycetaceae.]

DICHAENOPSIS Paoli, n. g. Excipulaceae. Nuovo Giornale Botanico Italiano. Nuova Cerie, 12:97. 1905.

"Pycnidia tipice beogena, innato-erumpentia, irregulariter elliptica, hysteriformia, coriaceocarbonacea, atra, rima longitudinali notata, in maculas irregulares plerumque aggregata. Sporulae oblongae 2-pluriseptatae, fuscae."

[Deuteromycetaceae.]

FAIRMANIA Sacc. n. g. Sphaeroidaceae. Annales Mycologici 4:276. 1906.

"Pycnidia superficialia, globoso-papillata, membranaceo-subcarbonacea, nigra, glabra. Sporulae semilunato-reniformes, continuae, fuligineae. Basidia parum evoluta. Praecipue forma peculiaris sporulae, soleae calcaneum exakte imitantis, ab Epithyriō subgenere Coniothyrii dignoscitur."

[Deuteromycetaceae.]

FIORIELLA Sacc. n. g. Leptostromataceae. Annales mycologici 3:168. 1905.

"Pycnidia innato-erumpentia, longitudinaliter elongata, membranaceo-carbonacea, nigricantia, rima lata longitudinaliter dehiscentia. Sporulae elongatae, fusoideae, brevissime pedicellatae, 1-septatae, hyalinae."

[Deuteromycetaceae.]

HEMISPORA Vuillemin. n. g. Mucedineae. Bulletin Trimestriel de la Société Mycologique de France 22:128. pl. 7. 1906.

"Mycélium de Mucédinée-Macronémée, abondant, hyalin, fin, cloisonné, ramifié.

"Tubes fertiles, ramifiés à la base.

"Chaque rameau conidiophore se termine par une vésicule (protoconidie) précédée d'un étranglement annulaire à paroi épaisse, brune, rigide.

"La vésicule se transforme, en tout ou en partie, en une série de segments sporiformes (deutéroconidies). Parfois elle s'allonge en un nouveau conidiophore ou émet des ramifications susceptibles de se comporter de même."

[Deuteromycetaceae.]

HYSERIDIUM Karst. n. g. Leptostromataceae. Acta Societatis pro Fauna et Flora Fennica, 274:10. 1905.

"Pyrenia dimidiata, lanceolata. Sporulae fusoides-bacillares, 3-septatae, hyalino-lutescens."

[Deuteromycetaceae.]

LINDAUOPSIS A. Zahlbrückner, n. g. Hyphomycetaceae. Berichte der Deutschen Botanischen Gesellschaft 24:145. 1906.

"Fungus in hymenio lichenum parasitans, hyphis dichotome divisis, flaccidis, inaequalibus (non cylindricis), decoloribus, lateraliter gemmiferis, apice furcatis, conidiis binis, terminalibus, hyalinis, uniseptatis, membrana tenui et laevi cinctis."

"In hymenio caloplacae callopismatis parasitans et apothecia deformans."

[Deuteromycetaceae.]

MELANOBASIDIUM Maublanc, n. g. Tuberculariaceae. Bulletin trimestriel de la Société Mycologique de France 22:69. 1. 13. 1906.

"Foliicolum, maculicolum; sporodochia minima, erumpentia, atrax, ex hypili ramosis, septatis, intricatis composita, sporophoris cylindricis, densis, septatis, concoloribus vestita; conidia solitaria, acrogena ovoidea, hyalina."

[Deuteromycetaceae.]

MUCHMORIA Sacc. n. g. Dematiaceae. Annales Mycologici 4:277. 1906.

"Hyphae septatae, brunneae, caespitosae; steriles ramosae, decumbentes, fertiles assurgentiae, apice in vesiculam globulosam inflatae; vescicula ubique muriculato-conidiophora. Conidia ovato-ellipsoidea v. oblonga, 1-septata, non catenulata, fuliginea. A genere cordana conspicue differt hyphis densiusculae caespitosis, fertilibus apice inflatis et muricato-conidiophoris."

[Deuteromycetaceae.]

MYCORHYNCHUS Sacc. n. n. Nectrioidaceae. Sylloge Fungorum 18:418. 1906.

Rhynchomyces Sacc. & March. 1885. not Wilk. 1866.

[Deuteromycetaceae.]

PLATYCARPIUM Karst. n. g. Leptostromaceae. Acta Societatis pro Fauna et Flora Fennica, 27⁴:10. 1905.

"Pyrenia dimidiata, subsuperficialia, membranacea, effusa, astoma, rufa. Sporulae continuae, falcatae, hyalinae."

[Deuteromycetaceae.]

PSEUDOSTEGIA Bubak, n. g. Melanconiaceae. Journal of Mycology 12:56. 1906.

"Fruchtlager flach, rundlich im Umriss, subepidermal, später deckelartig die Epidermis aur-hebend, dann flach schussel-formig und am Rande mit Borsten besetzt. Sporen sichelformig, einzellig, hyaline. Sporeenträger aus dem Inneren der obersten dekapitirten Zellen hervorbrechend, zylindrisch, hyalin oder schwach gelblich."

[Deuteromycetaceae.)

RAMULASPERA Lindroth, n. g. Moniliaceae. Acta Societatis pro Fauna et Flora Fennica, 22³:5. 1902.

"(= Ramularia, aspera, d. h. eine Ramularia mit stachligen Konidien). Gattungscharaktere wie bei Ramularia aber mit Konidien, die mit reichlichen, gleichmässig zerstreuten und zugespitzten winzigen Stache versehen sind."

[Deuteromycetaceae.)

SCHOENHORNIA Bubak, n. g. Excipulaceae. Bulletin de l'Herbier Boissier II. 6:483. 1906.

"Pykniden anfangs subepidermal, kuglig geschlossen, später nackt, schusseliformig, am Rande an der Basis borstig, weich. Gehäuse aussen schwarz-grünlich, innen hellgelblich bis olivenbraun. Sporen ellipsoidisch bis spindelformig, schwarzlich-olivenbraun. Sporeträger sehr lang stäbchenförmig, einzellig, oben mit einem schwärzlich-olivenbraunen Kragen versehen und darueber oft konisch verlängert, hell-gelbbraun."

[Deuteromycetaceae.)

TRICHOFUSARIUM Babak, n. g. Tuberculariaceae. Bulletin de l'Herbier Boissier II. 6:488. 1906.

"Sporenlager polsterförmig, subepidermal, bald hervorbrechend, klein, hellgefärbt, gelatinös, von zerstreuten helleren Borsten umgeben. Sporeträger strauchartig verzweigt. Konidien spindelformig, einzellig, hyalin."

INDEX TO NORTH AMERICAN MYCOLOGY.

Alphabetical List of Articles, Authors, Subjects, New Species and Hosts, New Names and Synonyms.

W. A. KELLERMAN.

(Continued from page 135.)

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Bull. Torr. Bot. Club, 33:426. Aug. 1906.
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cidium conorum-piceae Rees; Peridermium conorum Thuem.;
Peridermium engelmanni Thuem.; Aecidium engelmanni
Dietel], on cones of *Picea mariana* (Mill.) B.S.P. (*Abies
nigra* Desf.); *Picea rubra* (Lamb.) Link (*Picea rubens*
Larg.); *Picea canadensis* (Mill.) B.S.P. (*Picea alba* Link);
Picea engelmanni (Parry) Englm.; *Picea excelsa* L. Bull.
Torr. Bot. Club, 33:431. Aug. 1906.

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PERIDERMIUM consimile Arth. & Kern n. sp., on *Picea mariana* (Mill.) B.S.P. (*Abies nigra* Desf.), or *Picea rubra* (Lamb.) Link (*Picea rubens* Sarg.) Bull. Torr. Bot. Club, 33:427. Aug. 1906.

PERIDERMIUM engelmanni Thuem. *syn. of Peridermium conorum-piceae q. v.*

PERIDERMIUM laricis (Kleb.) Arth. & Kern n. n. [Aecidium laricis Kleb.] on *Larix decidua* Mill. Bull. Torr. Bot. Club, 33:436. Aug. 1906.

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PEZIZA setigera Phill., *syn. of Lachnum setigerum q. v.*

PEZIZA subclavipes Phil. & Ell., *syn. of Macropodia schweinitzii q. v.*

PEZIZA tomentosa Schw., *syn. of Macropodia schweinitzii q. v.*

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PICEA alba Link, *see Picea canadensis.*

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PSATHYRA vestita Peck n. sp., fallen leaves and grass. N. Y. State Mus. Bull. 105 (Bot. 9):28. Aug. 1906.

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- PUCCINIA tecomae Sacc. et Syd. *syn. of Prosopodium appendiculatum q. v.*
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- QUERCUS macrocarpa, host to Phyllactinia corylea angulata Salmon n. var. Ann. Mycolog. 3:500. Dec. 1905.
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NOTES FROM MYCOLOGICAL LITERATURE. XXIV.

W. A. KELLERMAN.

Long, William H.

An article by this author entitled "The Phalloideae of Texas" was published in the Journal of Mycology, May 1907. The species discussed were *Phallus rubicundus*, *Ph. impudicus* var. *imperialis*, *Mutinus caninus*, *Simblum sphaerocephalum*, and *S. texense* (Dictybole *texense*), all illustrated by half-tones. Constant characters for any given species were color of stipe, pileus and eggs; surface markings of cap; structure of stipe as to number, shape and openings of the chambers. Variable characters were shape of both stipe and pileus within narrow limits; presence or absence of a veil; size of stipe and cap; and shape and size of eggs. Study of many specimens of the species of *Phallus* "seems to indicate that *Dictyophora* is not a good genus. Many of the plants especially of *Phallus impudicus* showed veils of varying degrees of permanency."

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This No. contains: Philibert Riel, Description d'une Amanite nouvelle de France (*Amanita emiliae*) du groupe de l'*A. muscaria*; G. Bainnier, Mycothèque de l'École de Pharmacie, IX-XI; A. Sartory, *Cryptococcus salmoneus* n. sp., levure chromogène des sucs gastriques hyperacides; et Étude bibliographique et biologique de l'*Oidium lactis*; N. Patouillard, Le *Ratia* nouveau genre de la série des *Cauloglossum*; M. Mangin et H. Hariot, Sur la maladie du Rouge du Sapin pectiné dans la forêt de la Savine (Jura).

Clinton, George Perkins.

Part I of Volume VII of North American Flora (pp. 1-82) was issued October 4, 1906, and is devoted to the Ustilaginales (Ustilaginaceae and Tilletiaceae). The paper is based on Dr. Clinton's monograph of North American Ustilaginales published in the proceedings of the Boston Society of Natural History, October, 1904. But the following additional species and varieties are here described: *Entyloma holwayi* Syd.; *Sphacelotheca diplospora glabra* Clinton & Ricker var. nov.; *Sph. diplospora verruculosa* Clinton var. nov.; *Tilletia eragrostidis* Clinton & Ricker; *T. muhlenbergiae* Clinton sp. nov.; *T. redfieldiae* Clinton sp. nov.; *T. redfieldiae* Clinton sp. nov.; *Tolyposporium globuligerum* (B. & Br.) Ricker; *Urocystis lithophragmiae* Garrett sp. nov.; *Ustilago kellermanii* Clinton sp. nov.; *U. punctata* Clinton sp. nov.; *U. rickerii* Clinton sp. nov.; *U. sieglingiae* Ricker. *Ustilago panici-leucophaei* Bref. has been placed in the genus *Sphacelotheca*. Keys, citations, hosts, etc., conform to the style adopted for the North American Flora.

Wilson, Guy West.

Guy West Wilson, New York Botanical Garden, Bronx Park, New York City, is engaged upon a monograph of the order Peronosporales, which includes the genera *Albugo* (*Cystopus*), *Basidiophora*, *Bremia*, *Kawakamia*, *Peronospora*, *Phytophthora*, *Plasmopara*, *Pseudoplasmodiophora*, and *Sclerospora*. He would be glad to receive material, both North American and foreign, of any species of the group. Correspondence is invited.

Journal of Mycology. Vol. 13, March, 1907.

The table of Contents of the Journal of Mycology for March is as follows: Arthur — McAlpine's Studies of Australian Rusts; Bessey — Spore Forms of *Spegazzinia ornata* Sacc.; Saccardo — New Fungi from New York; Wilson and Seaver — Ascomycetes and Lower Fungi; Morgan — North American Species of Agaricaceae; Ricker — Third Supplement to New Genera of

Fungi; Stevens—List of New York Fungi; Kellerman—Notes from Mycological Literature, XXII; Index to North American Mycology; Editor's Notes.

Fungi Utahenses. Fascicle Five. 19 Jan., 1907.

This set contains specimens Nos. 101-125. Fourteen are species of *Puccinia*, one *Phragmidium* [*Ph. horteliae* Garrett n. sp. on *Hortelia gordoni* Hort.], one *Pucciniastrum* and nine *Uromyces*.

Selby, A. D.

Under the caption "On the Occurrence of *Phytophthora infestans* Mont., and *Plasmopora cubenses* (B. & C.) Humphrey, in Ohio," it is stated (in the Ohio Naturalist of February, 1907), that of the first, specimens were collected in Ohio in the early eighties; and of the latter, in 1895. Their histories are further outlined and environments discussed.

Wilson, Guy West.

An interesting species—"Melanospora parasitica"—collected in a park in New York City, is reported in *Torreya* for March, 1907. It occurred on *Isaria farinosa* (Dicks) Fries, the conidial stage of *Cordyceps militaris* (L.) Sacc. According to Sac-кардо's *Sylloge* two ascomycetous fungi occur on this host—but Mr. Wilson finds that they are one and the same species. It was first described as *Sphaeronema parasitica* by Tulane, but shortly afterward transferred to the genus *Melanospora*. The species from America was described by Ellis and Everhart as *Ceratostoma biparasiticum*. This and the *Sphaeronema* first mentioned are synonyms of *Melanospora parasitica* L. Tul. & C. Tul.

Sumstine, David R.

Lentinus pulcherrimus n. sp. is described by Supt. Sumstine as "A new *Lentinus* from Pennsylvania"—see the March number of *Torreya*, 1907. The plants resemble *Coltricia cinnamomea* (Jacq.) Murr. and closely allied to *L. villosus*, *sepiarius*, *sparsibarbis* and *pyramidalatus*; to separate it from which a key is given.

Arthur, J. C.

The morphological characters, life cycle, and family of the host are taken into account in establishing "New Genera of Uredinales," as reported in the January number of the *JOURNAL OF MYCOLOGY*, 1907. Dr. Arthur remarks that the Rusts are minute plants and the diagnostic characters must be sought for with corresponding minutiae. The new genera proposed are (1) *Pelioma*, in which the cycle of development includes pycnia and

telia, both subepidermal—the type species being *Puccinia nivea* Holw.; (2) *Spirechina*, the cycle imperfectly known, only uredinia and telia recognized, both subepidermal—based on *Uredo loeseneriana* P. Henn.; (3) *Prosopodium*, cycle includes pycnia, uredinia and telia, all subcuticular—the type *Puccinia appendiculata* Wint.; (4) *Nephyllicis*, cycle includes pycnia and telia, both subcuticular—type species *Puccinia elegans* Schroet.

Howe, Jr., Reginald Heber.

A list is given of "Some Lichens of Mt. Watatic, Massachusetts," the Bryologist for May, 1906, 38 species, which were collected in the ascent to its summit (1875 feet) Dec. 28, 1905.

Saccardo, P. A.

Six "New Fungi from New York" are described in the March number of the JOURNAL OF MYCOLOGY: *Pleosphaeria fairmaniana*, *Sphaeropsis Americana*, *Sphaeropsis rumicicola*, *Diplodia hortensis*, *Hymenopsis hydrophila*, and *Zygodesmus avellaneus*. All are illustrated by text figures.

Wilson, Guy West, and Seaver, Fred Jay.

It is the intention of the writers, as stated in the JOURNAL OF MYCOLOGY for March, 1907, to issue, as material accumulates, exsiccati of fungi under the title "Ascomycetes and Lower Fungi," the scope of the work being limited to Ascomycetes, Deuteromycetes and Phycomycetes. An annotated list of the contents of the first fascicle, 25 species, is given. Synonomy is included and three new combinations are made: *Gloniopsis smilacis* (Schw.), *Nectria purpurea* (L.), and *Rhytisma andromedae-ligustrinae* (Schw.).

Morgan, A. P.

A monographic enumeration with synoptic keys has been begun by this author, in the JOURNAL OF MYCOLOGY for March, 1907, of the North American Species of Agaricaceae. A synopsis of the genera of Melanosporae, also the 20 species of *Panaeolus*, form the first installment.

Arthur, J. C.

In a review of "McAlpine's Studies of Australian Rusts," JOURNAL OF MYCOLOGY, March, 1907, Dr. Arthur says the thoroughness with which the author has accomplished his task, the culmination of many years of observation and study, has insured a valuable work of reference for both local and other botanists.

Bessey, Ernst A.

The genus *Spegazzinia* seems to stand rather apart from any of the genera in the group *Tuberculariae Dematiaeae*, says the author, on account of the peculiar structure of the spores. The article, "Spore Forms of *Spegazzinia ornata* Sacc," in the *JOURNAL OF MYCOLOGY*, March, 1907, shows that the statement in *Sylloge Fungorum* is erroneous, and that the conidiospores bear two kinds of spores — long-stalked spiny conidia and short-stalked, smooth conidia; the two kinds of spores borne independently of each other directly from the sporodochial hyphae. A plate of good illustrative figures accompanies the article.

Stevens, F. L.

Fungi collected in Onandago County, N. Y., and deposited in the collection of the Onandago County Botanical Club (Syracuse), form the "List of New York Fungi" published in the *JOURNAL OF MYCOLOGY*, March, 1907.

Massee, G., and Crossland, C.

A complete account of the known fungi of the county: "The Fungus Flora of Yorkshire," is given by these authors, based mainly on fourteen successive annual fungus forays. It forms Vol. 4 of the Botanical transactions of the Yorkshire Naturalists' Union, a book of 396 pages. Habitat and localities are given for the 2,626 species.

Transactions British Mycological Society, Season 1905.

This part consists of pp. 100-131 with plates 10-13 and contains the following articles: Report of the Haslemere Foray and complete list of Fungi and Myctozoa gathered; Combating the Fungoid Diseases of Plants, R. F. Biffen; Note on *Sphaeropsis pinastri* Sacc., Miss A. Lorrain Smith; Mycology as a Branch of Nature Study, J. F. Rayner; Fungi New to Britain, Miss A. Lorrain Smith and Carleton Rea.

Smith, Erwin F., and Townsend, C O.

A special article in *Science*, April 26, 1907, gives an account of "A Plant-tumor of Bacterial Origin." For two years the authors have been studying a tumor or gall which occurs naturally on the cultivated marguerite, or Paris Daisy. The organism has been isolated and galls have been reproduced abundantly — the inoculation having been made with needle picks — on the natural herb, on stems of tobacco, tomato, potato, sugar beets, peach trees, the galls in the latter case closely resembling young stages of crown gall. "It is too early, perhaps, to say positively that the cause of the wide-spread and destructive crown-gall of

the peach has been determined by these inoculations, but it looks that way. . . . That the crown-gall of the peach is due to a myxomycete [Dendrophagus globus] the writers have never been willing to admit." The organism has been named *Bacterium tumefaciens* n. sp.

Kabát et Bubák.

Fasc. IX, "Fungi Imperfecti exsiccati" was issued [from Furnau et Tabor (Bohemia)] 15 April, 1907. The numbers are 401-450.

Holway, E. W. D.

Part II of Vol. I. of North American Uredineae (pp. 33-56, pl. 11-23) was issued May 15, 1906. The work is admirable in every way — the fine photomicrographs being unique.

Kellerman, W. A.

An analysis and review is given in the May (1907) No. of the *JOURNAL OF MYCOLOGY* of "Arthur's Uredinales of the North American Flora."

Winslow, C. E. A., and Rogers, Anne F.

The "Generic Characters in the Coccaceae" is the title of an article in *Science*, May 24, 1906. They say "The best basis for a natural classification is the statistical study of a large series of individuals, which will disclose the points about which the largest number of races are grouped, which are presumably the type centers around which the organisms vary." Six generic groups are established: *Streptococcus*, *Aurococcus* n. g., *Diplococcus*, *Albococcus* n. g.—these forming the family *Paracoccaceae* (parasitic forms); and *Micrococcus*, *Sarcina*, *Rhodococcus* n. g.—forming the *Metacoccaceae* (saprophytic forms).

Kellerman, Karl F., and Fawcett, Edna H.

An abstract of "Movements of Certain Bacteria in Soils," published in *Science*, May 24, 1907, indicates that in sterilized favorable soils saturated with water, *Bacillus ochraceus*, *Pseudomonas radicicola*, and the paracolon organism grow with equal speed, progressing about one inch in 48 hours. In soils barely moist *Pseudomonas radicicola* progresses at the rate of one inch in 72 hours, while the two other forms are reduced to a rate of about one inch in 8 days.

Lloyd, C. G.

Mr. Lloyd issued "Letter No. 10" from Paris, July, 1906, (8 pages) commenting on Polyporii received from American correspondents, preceded by some general remarks on work by poly-

porists, and followed by a statement touching the Mycological Situation in America. Among other things he says: "The most and best systematic work on *Polyporus* was done by Fries. His system and names have been in general use for two generations, and are familiar to all. We therefore feel that no attempt should be made to change them except in very exceptional cases."

Society of American Bacteriologists, Eighth Annual Meeting.

The report of the meeting held convocation week, 1906-7, is given in *Science*, May 24, 1907. The articles that seem more or less to concern general botany or taxonomy are the following: Movements of Certain Bacteria in the Soil (Karl F. Kellerman and Edna H. Fawcett); General Characters in Coccaceae (C. E. A. Winslow and Anna F. Rogers); On the Cultivation of *Spirillum obermeieri* (T. G. Nevy and R. R. Knapp); Bacteria of the Dairy Wells near Washington, D. C. (Karl F. Kellerman and T. D. Beckwith).

Massee, George.

In the *Philippine Journal of Science*, April, 1907, the author gives a list of 18 species of "Philippine Myxogastres," remarking that "it is not surprising, but on the contrary, somewhat gratifying, to announce that no new species have been discovered."

Ricker, P. L.

The "Third Supplement to the New Genera of Fungi published since the year 1900, with citations and the original descriptions" compiled by P. L. Ricker, is printed in the March, May and July Numbers of the *JOURNAL OF MYCOLOGY*.

Holway, E. W. D.

Professor Holway has distributed Part III, (Vol. I) of his North American Uredineae. Hosts of about fifteen families are included, and the serial number of the Rusts has now reached 120. New species here published are: *Puccinia sidalceae* Holway n. sp. on *Sidalcea oregana* (Nutt.) Gray; *Puccinia ornatula* Holway n. sp. on *Viola (canadensis?)*, Alpine meadow glacier, B. C.; and *Puccinia glabella* Holway n. sp. on *Boisduvalia glabella* (Nutt.) Walp. The critical work shown in this valuable publication has been emphasized previously, so also has the admirable plates been mentioned. In this part some of the photographs, even when amplification is 500 diameters, are remarkably and surprisingly excellent.

Harris, Carolyn W.

"A List of Foliaceous and Fruticous Lichens collected at Chilsom Lake, Essex County, New York, altitude 12,000 feet"—150 species, is given in the May Bryologist, 1906.

Guttenberg, Hermann Ritter von.

The anatomy of galls caused by fungi has not generally been fully investigated in connection with the gall-producing agent, or as the author says, "Stehen eingehendere Untersuchungen ueber die von Pilzen an hoheren Pflanzen hervorgerufenen Missmildungen, ueber die Pilzgallen oder Mycocecidien, derzeit noch aus." In this brochure of 70 pages and four double-page lithographic plates entitled "Beitraege zur Physiologischen Anatomie der Pilzgallen," he has given an exhaustive account of *Albugo candida* on *Capsella bursa-pastoris*, *Exoascus amentorum* on *Alnus incana*, *Ustilago maydis* on *Zea Mays*, *Puccinia adoxae* on *Adoxa moschatellina*, and *Exobasidium rhododendri* on *Rhododendron ferrugineum* and *Rh. hirsutum*.

Harshberger, John W.

It is not usual to regard *Physarum cinereum* as "A Grass-Killing Slime Mould," but under this caption the author reports in the Proceedings of the American Philosophical Society, held at Philadelphia, Vol. XLV, No. 184, that the grass had been destroyed in spots by this organism, "the blades of grass were killed by the plasmodium of this myxomycete spreading across the lawn." "It left its saprophytic habit, assuming a grass-killing one."

Kauffman, C. H.

A revision, with many additions, of the Key printed in the June (1905) Torrey Bulletin is given in the January Number of the JOURNAL OF MYCOLOGY, 1907, with 8 pages of plates, under the title of "The Genus *Cortinarius* with key to the species." Mr. Kauffman offers pertinent suggestions in regard to studying these plants, stating *inter alia* that young unexpanded plants must be examined as well as mature ones. Next, a careful description must be made with special reference to the difference in the color of the gills in the young and old plants, etc. Amateurs and beginners have here just such suggestions as they need in undertaking the study of the many species of the genus. The admirable key deals with about seven dozen species.

Fungi Columbiani, Century XXIV.

This was issued March 15, 1907, Elam Bartholomew, Stockton, Kansas. Nearly two dozen *Puccinia* packets are included, about one dozen *Uromyctes*, many *Cercosporas*, a few *Aecidia*, and one or two species each of many other genera.

Bergen, Joseph Y., and Davis, Bradley M.

In a Laboratory and Field Manual of Botany, 1907, the authors give directions for "Type Studies" of the Schizomycetes, (pp. 102-5), Saccharomycetes (pp. 105-6), Phycomycetes (pp. 107-9), Ascomycetes (pp. 110-113), Basidiomycetes (pp. 114-117).

Rabenhorst's Kryptogamen-flora, Pilze, 104 Lief., 16 Mai, 1907.

In this part Dr. G. Lindau continues with the Hyphomycetes, taking up the II. Abteilung Phaeodidymae with the three Unter-abteilungen: Bisporeae, Cladosporieae and Cordaneae.

Annales Mycologici, Vol. V. No. 1. Feb., 1907.

The articles are: Potenia A., Mycologische Studien; Rick, Fungi Austro-American Fasc. V. u VI; Tranzschel, W., Kulturversuche mit Uredineen im Jahre 1906; Vuillemin, P., sur le Dicranophora fulva Schroet.; Bubák, Fr. und Kabát, J. E., Sechster Beitrag zur Pilzflora von Tirol; Schorstein, Josef, Ueber Polyporus vaporarius (Pers.); Guillermond, A., A propos de l'origine des levures; Dietel, P., Uredineen aus Japan; Rehm, Ascomycetes exs. Fasc. 38; Neue Literatur; Referate und kritische Besprechungen.

Harrison, L. C., and Barlow, B.

"Some Bacterial Diseases of Plants Prevalent in Ontario," a general account, forms Bulletin 136, Ontario Agricultural College, August, 1904. The subjects are Fire Blight or Twig Blight, Bacteriosis of Beans, Soft Rot of Cauliflowers, Fall Turnip, Swedes or Yellow Turnip and A Rot of Celery.

Chester, Frederick D.

Bulletin No. 66, Delaware Agricultural Experiment Station, a dozen pages is devoted to "Soil Bacteria and the Nitrogen Assimilation." Issued November, 1904.

Pammel, L. H.

A general illustrated account of the "Cedar Apple Fungi and Apple Rust in Iowa" forms Bulletin 84. Experiment Station, Ames, Iowa.

Reed, Howard, S.

Both a general and technical account is given of "Three Fungous Diseases of the Cultivated Ginseng"—*Vermicularia dematium* (Pers.) Fr., *Pestalozzia funera* Desm., and *Neocosmospora vasinfecta* var. *nivea* (Afk.) Smith. See Bulletin No. 69, Missouri Agricultural Experiment Station, October, 1905.

Stevens, F. L., and Hall, J. G.

A black rot of apples closely imitating in appearance that caused by *Sphaeropsis*, is made the subject of a paper in the JOURNAL OF MYCOLOGY for May, 1907. The authors find the cause in a new species of fungus, which they call *Volutella fructi*. A page of outline drawings accompanies the description.

Fungi Selecti Guatemalenses, Decade II.

For this Decade the labels are published in the May number of the JOURNAL OF MYCOLOGY, 1907. The list is as follows: 11. *Aecidium byrsinimae* Kern & Kellerman on *Byrsinima crassifolia* (L.) H. B. K. 12. *Balansia trinitensis* Cooke & Massee on *Panicum* sp. indet. 13. *Coleosporium plumierae* Patouillard on *Plumiera rubra* L. 14. *Puccinia conocephalii* Seymour on *Eupatorium rafaelense* Coulter. 15. *Puccinia heliotropii* Kern & Kellerman on *Heliotropium indicum* L. 16. *Puccinia purpurea* Cooke on *Sorghum vulgare* Pers. 17. *Puccinia tetramerii* Seymour on *Blechum brownii* Juss. 18. *Puccinia tithoniae* Dietel & Holway on *Tithonia tubaeformis* Cass. 19. *Uredo biocellata* Arthur on *Pluchea odorata* Cass. 20. *Uredo trixitis* Kern & Kellerman on *Trixis frutescens* P. Br.

Herre, Albert W. C. T.

In the April No. of the Botanical Gazette, 1907, this subject is discussed, namely, "Lichen Distribution in the Santa Cruz peninsula, California." Incidentally the description is given of *Lecanactis zahlbruckneri* Herre n. sp., and *Dirina franciscana* A. Zahlbruckner n. sp.

Mycological Notes, No. 24. Dec., 1906, C. G. Lloyd.

This No. gives work "Concerning the Phalloids," "The Common Bird's-nest Fungi," and on "An Unknown South American *Lycoperdon*" [L. septimus — "We have named this plant 'seventh' in reminder of the fact that it belongs to the seventh section of a recent paper on the Genus *Lycoperdon*, and is the only species we have seen that does belong here"]. Good figures are shown of several species — *Clathrus cibarius*, *Clathrus cancellatus*, *Clathrus gracilis*, *Laternea columnata*, and *Mutinus elegans*.

Shear, C. L., and Wood, Anna K.

These authors report some interesting studies, Botanical Gazette, April, 1907, under the head "Ascogenous Forms of *Gloeosporium* and *Colletotrichum*." They have grown both the conidial and ascogenous stages from eight different hosts, namely, "*Gloeosporium rufomaculans* (Berk.) v. Thümen, from the cultivated grape, *Vitis* sp.; *G. fructigenum* Berk., from the apple;

an apparently unnamed *Gloeosporium* from the cranberry, *Vaccinium macrocarpum*; *G. elasticae* Cooke & Massee, from the leaves of the rubber plant, *Ficus elastica*; a form from the locust, *Gleditschia triacanthus*, which does not appear to have been reported before; one from *Ginkgo biloba*, also not heretofore reported; *Colletotrichum gossypii* Southw., from cotton; and *C. Lindemuthianum* (Sacc. & Magnus) Bri. & Cav., from the cultivated bean." The one from the apple only has its ascogenous form reported heretofore. The authors used in the cultures sterilized corn meal, 75° to 50° F. Referring to the fact that forms occurring on different hosts have been generally regarded as different species, they say their study "leads to the conclusion that they cannot be successfully segregated as species on morphological grounds." They use the name *Glomerella rufomaculans* (Berk.) Spauld. & v. Schrenk.

Hasselbring, Heinrich.

In the Botanical Gazette for April, 1907, this author discusses "Gravity as a Form-Stimulus in Fungi." He experimented with *Polystictus cinnabarinus*, *Schizophyllum commune*, and some species of *Coprinus*. He says in conclusion, "it follows from the foregoing observations on three widely separated forms of the Basidiomycetes, that although gravity has no effect on the organization of the hymenophore, it has a marked influence on determining the configuration of the fruit-body of some forms. This effect is most marked in the more primitive forms, which are thereby shown to be the more plastic. In the more highly differentiated forms [*Coprinus*] this effect of gravity disappears."

Stevens, F. L.

A Rust found in North Carolina on *Melothria pendula*, "Puccinia on Melothria," Botanical Gazette, April, 1907, is named *P. Melothriæ* Stevens n. sp., accompanied with outline figures of the spores. It belongs to the Leptopuccinia type.

Smith, R. Greig.

Dr. Smith reports a "Gelatin-hardening Bacterium," which was isolated during the bacteriological examination of the tissues of *Schinus mollis*, the specimen of which was exuding small quantities of a turquoise-colored gum resin. To the new species the name of *Bacillus indurans* has been given. This report is found in the proceedings of the Linnean Society of New South Wales, 1905, Part 2, August 30th.

Hedcock, George Grant.

Experiments touching "Zonation in Artificial Cultures of Cephalothecium and Other Fungi," are reported in the 17th Annual Report of the Missouri Botanical Garden. The fungi used were Cephalothecium, Penicillium, Mucor and Hormodendron; they were grown on agar plates under five conditions of light. It was found that the cultures grown under red and orange light and in darkness exhibited uniform dense spore formation over the whole surface of the mycelium. Those under blue light and in ordinary light exhibited distinct daily rings of growth of alternating denser spore formation.

Hedcock, George Grant.

A very important paper giving the result of "Studies upon some Chromogenic Fungi which discolor Wood," is published in the 17th Annual Report of the Missouri Botanical Garden. Dr. Hedcock made a thorough study of the fungus-flora of the lumber pile. He reports exhaustively on about two dozen species. The arrangement is after this fashion: (I) wood-bluing fungi (*Ceratostomella*); (II) wood-blackening and wood-browning fungi (*Graphium*, *Hormodendrum*, *Hormiscium*, &c.); (III) wood-reddening fungi (*Penicillium*, *Fusarium*). Each fungus was grown upon a number of kinds of wood, as well as upon potato, rice, bean, sweet potato, and other similar media in tubes, in addition to cultures on agar media made from wood and other vegetable decoctions. In many instances new conidial stages of fungi were discovered; the new species are fully described.

Nicholas, Susie Percival.

Investigations were carried on touching "The Nature and Origin of the binucleated cells in some Basidiomycetes," and reported in the transactions of the Wisconsin Academy of Sciences, Arts, and Letters. Vol. XV, 1904, published in 1905. Studied were *Hypholoma perplexum* Pk., species of *Coprinus*, Rhizomorphs — *Poria*, *Pholiota praecox* Pers., *Lepiota naucina*, *Dictyophora duplicata* Ed. Fisch., and *Lycoperdon pyriforme* Schaeff. The binucleated cells were not found to originate through the formation of any special reproductive apparatus. Their formation is not necessarily followed immediately by the formation of a carpophore but no complete resumé can here be attempted.

Fink, Bruce.

Cladonia pyxidata and *Cladonia pityrea* are discussed in "Further Notes on Cladonias, XI." in the July No. of the *Bryologist*, 1907; half tone illustrations, enlarged, are given.

Harris, Carolyn W.

A list of 60 "Lichens of the Adirondac League Club Tract" is given in *Bryologist*, 10:64-6, July, 1907. They were collected in June in the vicinity of Little Moose Lake, Herkimer County, New York, at an altitude varying from 1788 to 2460 feet.

Journal of Mycology, Vol. 13, May, 1907.

The following items are given in the table of contents: Kellerman — Arthur's Uredinales of the North American Flora; Stevens & Hall — An Apple Rot due to *Volutella*; Kellerman — *Fungi Selecti Guatimalenses, Exsiccati Decade II*; Long — Phalloideae of Texas; Kellerman — Notes from Mycological Literature XXIII; Ricker — Third Supplement to New Genera; Kellerman — Index to North American Mycology; Editor's Notes.

Kusano, S.

The Author adds "A new species of *Taphrina* on *Acer*" to the four hitherto reported on this host, namely, *T. nikkoensis*; published in the Botanical Magazine, April, 1907. The fungus forms grayish scurfs on the leaves of *Acer purpurascens* at Nikko, Japan. In that region it is said some hosts are furiously attacked.

Annales Mycologici, Vol. V. No. 2. April, 1907.

This No. contains: Cavara F., e Mollica, N., Ricerche intorno al ciclo evolutivo di una interessante forma di *Pleospora herbarum* (Pers.) Rab.; Hori, S., On *Ustilago esculenta* P. Henn.; Lakon, Georg. B., Die Bedingungen der Fruchtkörperbildung bei *Caprinus*; Saccardo, P. A., Notae Mycologicae; Neue Literatur; Referate und kritische Besprechungen.

Fungi Selecti Exsiccati. Serie VIII.

This set, issued by Otto Japp, Hamburg, includes Nos. 176-200, with a supplement to six numbers issued previously. The date of issue of Serie VIII is November, 1906. A wide range of groups is represented.

Butler, E. J. and Hayman, J. M.

Messrs. Butler and Hayman give an extended account of "Indian Wheat Rusts," — the report being Vol. 1. No. 2. Botanical Series of the Memoirs of the Department of Agriculture in India, July, 1906. There are 58 pages and five plates, three of the latter being colored, and represent *Puccinia graminis*, *Puccinia glumarum* and *Puccinia triticina*.

Baxter, E. J.

The "Fungus Diseases of Sugar-cane in Bengal" forms Vol. I. No. 3. of the Memoirs of the Department of Agriculture in India, Botanical Series, July, 1906. The principal diseases discussed and illustrated by figures are: Red Rot (or Red Smut), *Colletotrichum falcatum*; Smut, *Ustilago sacchari* Rab.; *Diplodia cacaoicola* P. Henn; *Cytospora sacchari* Butl. sp. nov.; "Pineapple disease, *Thielaviopsis ethaceticus* Went; Black Rot *Sphaeronaema adiposum* Butler n. sp.; Brown leaf-spot, *Cercospora longipes* Butler n. sp.; Ring-spot, *Leptosphaeria sacchari* Br. & H.; and sooty mould, *Capnodium* sp.

Butler, E. J.

The "Annual Report of the Cryptogamic Botanist for 1905" is published in the first Annual Report of the Imperial Department of Agriculture in India, pp. 71-88, 1906. This is a general account of the work done, a large number of plant diseases having been encountered. Some work had been done previously by the mycologists, Doctors Cunningham and Barclay. Widely distributed and serious fungus pests are mentioned, as *Phytophthora infestans*, The common Rusts of wheat, smuts of wheat, oats and sorghum, *Exoascus deformans*, *Thielaviopsis ethaceticus*, etc.

Butler, E. J.

An important "Account of the Genus *Pythium* and some Chytridiaceae" is given by Mr. Butler, as Vol. I., No. 5, Botanical Series, Memoirs of the Department of Agriculture in India, February, 1907. In Part I the genus *Pythium* is fully discussed and monographed, new species being *P. indigoferae*, *P. diacarpum*, *P. palmivoram*, and *P. rostratum*. In Part II, Observations on some Chytridiaceae the following new species are described: *Pleolpidium irregulare*, *Pl. cuculus*, *Pl. inflatum*, *Pseudolpidium pithyii*, *Ps. gracile*, and *Nowakowskia ramosa*. Ten full page plates illustrate the species.

Burlingham, Gertrude Simmons.

Pertinent "Suggestions for the study of the Lactariae" are given by the author in the June No. of *Torryea*, 1907. After stating the case she summarizes the points in a blank form for guidance of the amateur or observer in recording the notes. It is suggested that the most complete and satisfactory color chart is the *Répertoire de Couleurs*, published by the French society of "Chrysanthémistes."

Lyman, George Richard.

The very important work by this author on "Culture Studies on Polymorphism of Hymenomycetes" is reported, as one of the contributions from the Cryptogramic Laboratory of Harvard University, in the proceedings of the Boston Society of Natural History, Vol. 33, No. 4, p. 125-209, pl. 18-26. Secondary spores are common, produced in immense numbers and varied fashion, in the Phycomycetes and Ascomycetes. But among the Autobasidiomycetes they are less commonly known, less varied, the basidiospores being the main or only agent of reproduction. The paper reviews the present knowledge and then includes an account of cultures of 28 species,—over 100 having been studied. Of the 28 species, five possess oidia, and chlamydospores were produced in abundance for about half dozen species. The perfect form of *Aegerita candida* was detected, namely, *Peniophora candida* (Pers.) Lyman n. sp. The author concludes that conidia and other highly specialized secondary methods of reproduction are rare, occurring more frequently in the Thelephoraceae.

Blakeslee, A. F.

"Heterothallism in Bread Mould, *Rhizopus nigricans*, Botanical Gazette, June, 1907. Comments are made on two papers recently published by Hamaker and by Namyslowski; then follows an account of cultures from zygomorphic material used by the latter author; and this is the judgment: The evidence at hand leads one to the conclusion that the large majority of the Mucorineae are heterothallic.

Chester, Frederick D.

In the 15th Annual Report of the Delaware College Agricultural Experiment Station, 1903, we find a valuable article entitled: "Observations on an Important Group of Soil Bacteria; Organisms related to *Bacillus subtilis*." He says by the *Bacillus subtilis* group is understood those members of the genus *Bacillus*, as defined by Migula, which produce spores, liquefy gelatine and grow under aerobic conditions. A synopsis is given, also descriptions of the ten species.

Hori, S.

It is noted that *Ustilago esculenta* P. Henn. causes the affected plants *Zizania latifolia*, at Tokio, Japan, to retain their green color for a long time in autumn, and thus they are at once distinguished from the normal plants which turn yellow early in autumn. The smutted part, extremity of the shoot, remains entirely concealed for a long time between the leaves and the leaf sheaths.

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EDITOR'S NOTES.

In the April No. of the Bulletin of the Torrey Botanical Club is published a new caste of the American Code of Botanical Nomenclature, being the 1904 Philadelphia canons with a few amendments. These changes are made in part to meet the requirements of the 1905 Vienna Code; but some of the rules and recommendations of the Vienna Congress are not acceptable to the members and alternates of the Nomenclature Commission of the Botanical Club of the A. A. A. S.

In Mycology as in other branches of Botany, uniform and concerted action among taxonomists is greatly to be desired; and all efforts leading to stability and uniformity are to be commended. Our Commission is insistent on the principle of types which the Vienna Congress failed to recognize. Another contention of the Americans — consistent and commendable — is that nothing should be arbitrary or exceptional in application. Objectionable therefore, is the action of the Vienna Congress in excluding a large number of generic names from the operation of all nomenclatorial rules, and in requiring diagnosis of new species to be in the Latin language after January 1st, 1908.

We have several comments to make on the new code, though space requires that one or two only be given here. Canon 1, should, we think, be omitted. There is a general agreement approximately if not essentially uniform as to the meaning of *species* in Nature — and even the conception of genus is not so divergent but that the work of specialists generally secures approval. We see no advantage in an attempted definition of species — surely the rules and practices in nomenclature are not dependent on the theoretical statement. Again, a genus may exist even if there is but one species and not a group, and any one of the entire series mentioned in Canons 3 and 4 may be similarly restricted — then wherefore "group" the representative? We think it adequate to substitute for the four Canons mentioned, the mere statement that the groups in ascending series recognized in botany are species, genera, tribes, families, orders, classes and divisions; and names of a lower group or of intermediate groups, when necessary, may be formed from the preceding by using the prefix *sub*.

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